

TREND STUDY 1-20-96

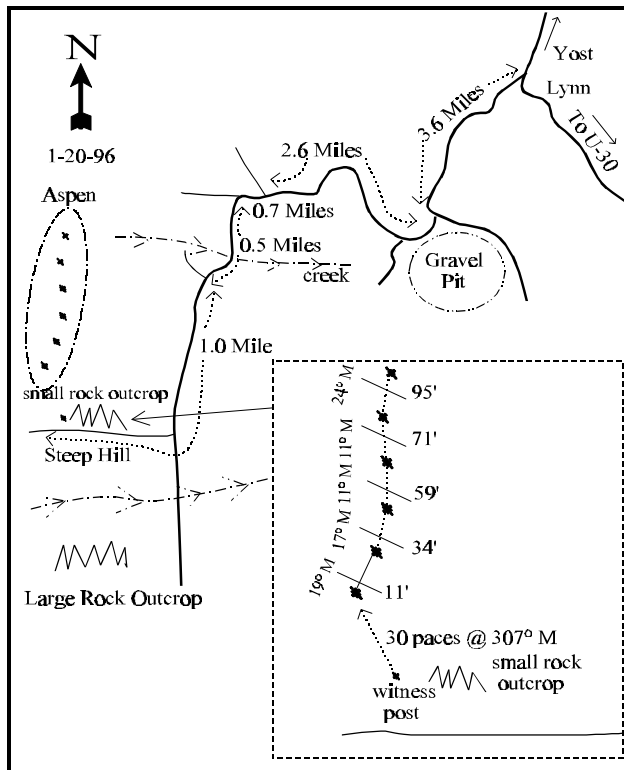
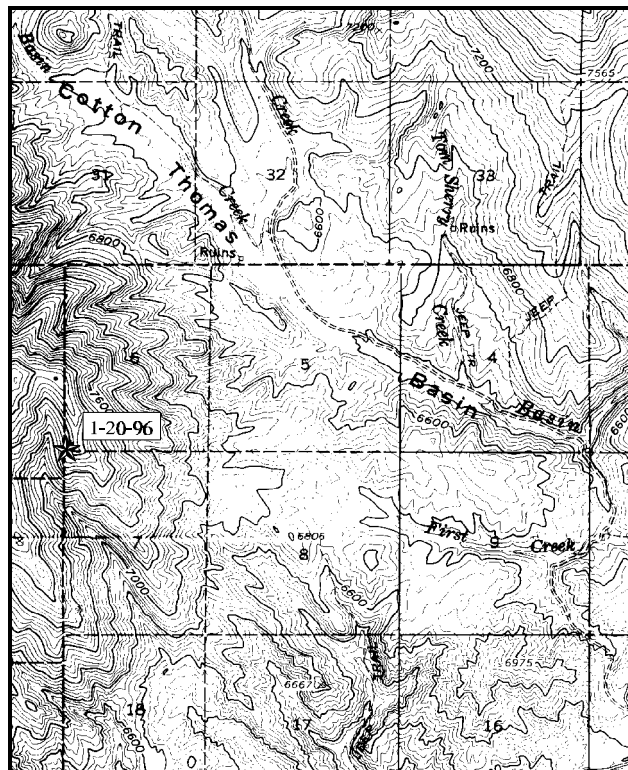
Study site name: Cotton Thomas. Range type: Aspen.

Compass bearing: frequency baseline 19 degrees magnetic.

Footmark (first frame placement) 5 feet, footmarks (frequency belts) Line 1 (11ft), line 2 (34ft), line 3 (59ft), line 4 (71ft), line 5 (95ft).

LOCATION DESCRIPTION

From Lynn, travel north approximately 1/4 a mile and take a left. Continue 3.6 miles and take a left just before the gravel pit. Continue 2.6 miles to a fork in the road, stay left and proceed 0.7 miles to another fork. Stay left again and proceed 0.5 miles (you will cross a creek and come to a fork). Stay left at the fork and proceed 1 mile going up a steep hill to the right to the witness post on the right side of the road. From the witness post walk 30 paces at 307° magnetic. The baseline doglegs down through the aspen. The 100-foot baseline runs 19° M., the 200-foot baseline runs 17° M., the 300-foot baseline runs 11° M., the 400-foot baseline runs 11° M., and the 500-hundred foot baseline runs 24° M.



Map Name: Cotton Thomas Basin '15

Diagrammatic Sketch

Township 13N, Range 17W, Section 6, UTM: 2-64-733E 46-39-651N

DISCUSSION

Trend Study No. 1-20

The Cotton Thomas site is new and occurs on private land, placed in one of the few aspen clones in the Grouse Creek Mountains. The area lies west of the town of Lynn near the Cotton Thomas Basin. Aspen is a critical vegetation type for deer summer range. This site contains many dead and decadent trees. Most of the vigorous trees are of the younger age class. The majority of the aspen in the vicinity appear to be stunted in growth and possibly declining, most likely this is a marginal site for aspen with prolonged drought since 1985. This aspen clone is in the bottom of a drainage that runs south to north. Aspect is to the north with a slope of 5% and elevation of about 7,000 feet. Cattle graze this area in the summer, but since this is private land, no numbers or season of use is known. Water and a salt lick is less than a mile away.

The soil is relatively deep, dark colored and probably deeper than the estimated effective rooting depth of 37 inches (see methods). Surface rock cover is scarce (<1%) and nearly absent in the profile. Vegetation and litter cover are abundant leaving little bare soil exposed (5%). Erosion is not a problem.

The browse component is not a critical part of deer summer range, but many are useful for providing some forage for wildlife and cattle. These include, mountain big sagebrush, serviceberry, aspen, wax current, woods rose, and snowberry. Most browse appears not to be utilized. Mountain big sagebrush is found around the fringes of the aspen clone along with a few scattered serviceberry. Most of the other shrubs occur within the aspen canopy. Aspen provides the most browse forage. Many young and mature trees are still available for browsing. Point quarter data estimates a density of 4,486 plants/acre. Average diameter is just under 1 inch. Larger mature trees account for only 5% of the population. Population estimates using shrub density strip data estimates a density of 3,240 plants/acre, 81% of which are young trees. Overhead canopy cover is about 36%. Utilization on available trees is light and percent decadency low at 2%. The number of dead trees is approximately 300 per acre.

The herbaceous understory is diverse and very abundant. Thirteen grasses and one sedge were encountered. The most abundant species includes Kentucky bluegrass, sheep fescue, and bog bluegrass. The dominance of Kentucky bluegrass provides evidence of past heavy livestock grazing on this area as it increases with heavy livestock use.

The forb composition is diverse with 41 species inventoried. Dominant species include arrowleaf balsamroot, violet, dandelion, sweetroot, alpinebog swertia, and a milkvetch. Few forbs appeared to have been utilized at the time of reading, June 12, but livestock will likely graze later this summer.

1996 APPARENT TREND ASSESSMENT

Protective ground cover is abundant and well dispersed. Erosion is not a problem except on disturbed areas and cattle trails. The browse component is diverse and basically shows little use. Aspen is the key browse species. The stand is dense and mostly young with large mature trees comprising only about 5% of the population. The low percent rate of decadency and small number of dead trees would suggest that this stand is in good vigor. There are a number of other useful browse species present, but they all appear to show little use. Trend for browse appears stable for these species and improving for aspen. The herbaceous understory is diverse but the grass component is dominated by the increaser species, Kentucky bluegrass, which increases in response to heavy grazing. There was no sign of grazing yet this season, but livestock may graze here later in the summer. Forbs are represented by many common to the aspen type. Few appear to

have been utilized.

HERBACEOUS TRENDS --
Herd unit 01 , Study no: 20

T Y P e	Species	Nested Frequency '96	Quadrat Frequency '96	Average Cover % '96
G	Agropyron trachycaulum	66	23	.61
G	Bromus anomalus	32	9	.19
G	Bromus inermis	4	1	.03
G	Carex spp.	40	17	.55
G	Elymus cinereus	36	13	1.20
G	Festuca ovina	96	27	2.83
G	Koeleria cristata	2	1	.03
G	Poa spp.	14	4	.47
G	Poa leptocoma	102	30	1.58
G	Poa pratensis	92	22	4.89
G	Poa secunda	3	1	.00
G	Stipa columbiana	9	3	.06
G	Stipa lettermani	5	1	.00
Total for Grasses		501	152	12.48
F	Achillea millefolium	12	7	.08
F	Agoseris glauca	52	24	.20
F	Antennaria rosea	10	3	.39
F	Arabis drummondi	14	6	.03
F	Artemisia ludoviciana	3	1	.03
F	Astragalus convallarius	20	7	.27
F	Aster spp.	43	19	.88
F	Astragalus spp.	69	20	1.00
F	Balsamorhiza sagittata	61	22	4.44
F	Borago officinalis	18	5	.07
F	Castilleja spp.	3	1	.00
F	Cirsium spp.	11	4	.19
F	Collomia spp. (a)	2	1	.00
F	Comandra pallida	8	5	.07
F	Collinsia parviflora (a)	96	26	.60
F	Crepis acuminata	16	6	.10
F	Cryptantha spp.	3	1	.00
F	Delphinium bicolor	17	6	.05
F	Descurainia pinnata	14	5	.10
F	Descurainia spp. (a)	14	6	.10
F	Galium spp.	130	40	.60

T y p e	Species	Nested Frequency '96	Quadrat Frequency '96	Average Cover % '96
F	<i>Geranium richardsonii</i>	43	18	.60
F	<i>Hackelia patens</i>	1	1	.00
F	<i>Helianthus</i> spp.	37	13	.48
F	<i>Hydrophyllum capitatum</i>	22	11	.56
F	Labiatae	20	8	.43
F	<i>Lupinus argenteus</i>	8	4	.07
F	<i>Mertensia oblongifolia</i>	51	27	.51
F	<i>Osmorhiza occidentalis</i>	77	24	1.84
F	<i>Penstemon</i> spp.	5	3	.01
F	<i>Phlox longifolia</i>	16	5	.02
F	<i>Polygonum douglasii</i> (a)	5	2	.01
F	<i>Senecio serra</i>	37	19	1.12
F	<i>Smilacina stellata</i>	8	3	.33
F	<i>Stellaria jamesiana</i>	83	32	.40
F	<i>Swertia perennis</i>	42	20	1.58
F	<i>Taraxacum officinale</i>	142	51	1.92
F	<i>Thalictrum fendleri</i>	100	37	5.16
F	Unknown forb-annual	7	4	.19
F	<i>Veronica biloba</i> (a)	53	16	1.24
F	<i>Viguiera</i> spp.	2	1	.03
F	<i>Viola</i> spp.	260	76	3.89
Total for Forbs		1635	590	29.71

BROWSE TRENDS --

Herd unit 01 , Study no: 20

T y p e	Species	Strip Frequency '96	Average Cover % '96
B	<i>Amelanchier alnifolia</i>	2	.16
B	<i>Artemisia tridentata</i> <i>vaseyana</i>	32	2.90
B	<i>Chrysothamnus</i> <i>viscidiflorus</i> <i>stenophyllus</i>	51	3.66
B	<i>Eriogonum</i> <i>heracleoides</i>	3	.06
B	<i>Mahonia repens</i>	10	.64
B	<i>Populus tremuloides</i>	66	10.64
B	<i>Ribes cereum cereum</i>	10	.21
B	<i>Symphoricarpos</i> <i>oreophilus</i>	96	17.82

T y p e	Species	Strip Frequency '96	Average Cover % '96
Total for Browse		270	36.11

BASIC COVER --

Herd unit 01 , Study no: 20

Cover Type	Nested Frequency '96	Average Cover % '96
Vegetation	481	64.94
Rock	89	.53
Pavement	132	.88
Litter	491	64.61
Bare Ground	177	4.94

SOIL ANALYSIS DATA --

Herd Unit 01, Study no: 20

Effective rooting depth (inches)	Temp °F (depth)	PH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
36.6	45.8	19.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A

PELLET GROUP FREQUENCY --

Herd unit 01 , Study no: 20

Type	Quadrat Frequency '96
Rabbit	1
Deer	1
Cattle	3

BROWSE CHARACTERISTICS --

Herd unit 01 , Study no: 20

A G E	YR	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Amelanchier alnifolia																	
Y	96	-	-	-	5	-	-	-	-	-	5	-	-	-	100		5
Total Plants/Acre (excluding Dead & Seedlings)												'96		100	Dec:		-

A G E	YR	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Artemisia tridentata vaseyana																		
S	96	1	-	-	1	-	-	-	-	-	2	-	-	-	40		2	
Y	96	12	-	-	7	-	-	-	-	-	19	-	-	-	380		19	
M	96	33	-	-	12	-	-	-	-	-	44	-	1	-	900	24 31	45	
D	96	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
X	96	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3	
Total Plants/Acre (excluding Dead & Seedlings)															'96	1320	Dec:	3%
Chrysothamnus viscidiflorus stenophyllus																		
S	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
Y	96	17	-	-	1	-	-	-	-	-	18	-	-	-	360		18	
M	96	62	-	-	47	-	-	-	-	-	109	-	-	-	2180	17 23	109	
D	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
Total Plants/Acre (excluding Dead & Seedlings)															'96	2560	Dec:	1%
Eriogonum heracleoides																		
M	96	6	-	-	-	-	-	-	-	-	6	-	-	-	120	8 11	6	
Total Plants/Acre (excluding Dead & Seedlings)															'96	120	Dec:	-
Mahonia repens																		
Y	96	-	-	-	4	-	-	-	-	-	4	-	-	-	80		4	
M	96	7	-	-	46	-	-	-	-	-	53	-	-	-	1060	6 7	53	
Total Plants/Acre (excluding Dead & Seedlings)															'96	1140	Dec:	-
Populus tremuloides																		
S	96	13	1	-	4	-	-	-	-	-	18	-	-	-	360		18	
Y	96	117	-	-	14	-	-	-	-	-	131	-	-	-	2620		131	
M	96	19	-	-	-	-	-	1	7	-	26	-	-	1	540	- -	27	
D	96	1	-	-	-	-	-	-	3	-	3	-	-	1	80		4	
X	96	-	-	-	-	-	-	-	-	-	-	-	-	-	300		15	
Total Plants/Acre (excluding Dead & Seedlings)															'96	3240	Dec:	2%
Ribes cereum cereum																		
Y	96	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3	
M	96	-	-	-	-	-	-	-	-	-	-	-	-	-	160	36 114	8	
Total Plants/Acre (excluding Dead & Seedlings)															'96	220	Dec:	-
Rosa woodsii																		
S	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
Total Plants/Acre (excluding Dead & Seedlings)															'96	0	Dec:	-

A G E	YR	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Symphoricarpos oreophilus																		
S	96	40	-	-	10	-	-	3	-	-	53	-	-	-	1060		53	
Y	96	44	2	-	36	-	-	-	-	-	82	-	-	-	1640		82	
M	96	257	-	-	59	-	-	-	-	-	316	-	-	-	6320	27 45	316	
D	96	2	-	-	-	-	-	-	-	-	1	-	-	1	40		2	
X	96	-	-	-	-	-	-	-	-	-	-	-	-	-	20		1	
Total Plants/Acre (excluding Dead & Seedlings)												'96		8000	Dec:		1%	